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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,123	12/02/2003	Raymond E. Ideker	5656.34	4773

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EXAMINER	
BERTRAM, ERIC D	

ART UNIT	PAPER NUMBER
3766	

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/727,123	IDEKER ET AL.	
	Examiner	Art Unit	
	Eric D. Bertram	3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *26-59* is/are pending in the application.

4a) Of the above claim(s) *29,30,34-40,46-48,50,53,58 and 59* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *26-28,31-33,41-45,49,51,52 and 54-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 26-28, 31-33, 41-45, 49, 51 and 52 have been considered but are moot in view of the new ground(s) of rejection.

Election/Restrictions

2. Newly entered claims 58 and 59 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. As indicated in the previous action, an electrical stimulus device is not included in the elected species. As a result, these claims areare withdrawn from consideration as being drawn to a non-elected species since these claims require the use of an electrical stimulus device.

3. Overall, claims 29, 30, 34-40, 46-48, 50, 53, 58 and 59 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

Specification

4. The amendments to the specification received on 9/13/2006 are acknowledged and accepted. Therefore, the objection to the specification is withdrawn.

Claim Rejections - 35 USC § 112

5. The amendments to claim 42 to overcome the 35 USC 112(2) rejections are acknowledged and accepted. The 35 USC 112(2) rejection of claim 42 has been withdrawn.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 26-28, 41-43, 49 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gelfand et al. (US 5,772,613, hereinafter Gelfand) in view of Link ("Commotio cortis: sudden death due to chest wall impact in sports"). Gelfand discloses

a method for performing chest compressions where an ECG instrument 123 is employed to sense the intrinsic spontaneous heart activity of a patient in real-time (Col. 9, lines 1-3). Based on this sensed activity, compression is applied using a CPR vest 102 that is timed to be delivered at a favorable time to improve cardiac function (Col. 9, lines 3-10). Gelfand does not disclose, however, identifying a vulnerable portion of an intrinsic spontaneous cardiac cycle, and then compressing the heart during a non-vulnerable time based in the identifying. Attention is directed to the secondary reference of Link, which discloses that low energy chest wall blows may result in sudden death due to the initiation of ventricular fibrillation (VF). It is the Examiner's position that the compressions delivered during CPR would inherently be categorized as low energy chest wall blows. Link further discloses that only blows delivered specifically during the upslope of the T-wave result in VF (see Experimental models section). In order to accomplish this, blows to the chest were timed with an intrinsic spontaneous cardiac cycle of a subject. Since VF was only induced during the T-wave of intrinsic spontaneous cardiac cycles, it is exceedingly apparent that low energy impacts to the chest wall should be avoided at all costs during this vulnerable period of the heart. Therefore, since Gelfand already teaches a method of timing compressions of the heart based on intrinsic spontaneous cardiac activity to improve cardiac function, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to time the compressions to avoid the vulnerable T-wave portion of the cardiac cycle, as suggested by Link, in order to avoid initiating VF in a subject.

10. Regarding claims 49 and 51, Gelfand, as modified above, discloses a method and apparatus completing all of the instructions contained in claims 49 and 51. Gelfand does not, however, specifically disclose the use of a computer-readable medium loaded with code containing the instructions. Although Gelfand does not disclose the medium, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include the medium since it is old and well known that a processor cannot function without first being programmed by a medium containing the necessary instructions.

11. Claims 31-33, 44, 45, 52 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gelfand in view of Link and further in view of Halperin et al. (US 6,390,996, hereinafter Halperin). Gelfand, as modified above, discloses the applicant's basic invention with the exception of using closed chest manual compression of the heart. While the use of closed chest manual compression is notoriously old and well known in the art, attention is also directed to the secondary reference of Halperin, which discloses the use of closed chest manual compressions based on sensed ECG patterns (Col. 2, line 62-Col. 3, line 17). Halperin also discloses the use of an automated controller and automatic compression device, thus teaching that the use of manual compressions or automatic compressions is interchangeable when applying CPR. Therefore, since Halperin demonstrates that manual compressions and automatic compressions were art-recognized equivalents at the time of the applicant's invention for supplying CPR, one of ordinary skill in the art would have found it obvious to supply

manual compressions instead of automatic compressions since they produce the same results.

12. Regarding claims 32 and 54-56, Gelfand, as modified, also does not disclose generating an audible alert when compression is to be initiated. However, Halperin discloses that the amplitude of an audible indicator may be delivered to coincide with the desired frequency of chest compressions (Col. 9, lines 20-28). Furthermore, the audible indicator is inherently configured to indicate when to start and when to stop compressions since a user would compress in time with the audible signals, and would stop compression when the audible signal ceased. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Gelfand by including an audible alert as taught by Halperin in order to prompt a user to manually compress the chest of a subject at the proper rate.

13. Regarding claims 52 and 57, the rejections applied above to similarly worded claims 32 and 52-56 apply here as well. Gelfand does not, however, specifically disclose the use of a computer-readable medium loaded with code containing the instructions. Although Gelfand does not disclose the medium, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include the medium since it is old and well known that a processor cannot function without first being programmed by a medium containing the necessary instructions.

14. Regarding claim 45, Gelfand, as modified above, does not disclose a display configured to display a spontaneous intrinsic cycle of a subject. However Halperin discloses displaying ECG on a monitor to ascertain a true ECG signal (Col. 11, lines 50-

58). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include a visual display of cardiac cycles in order to help process CPR-affected ECG signals. Furthermore, a visual display will inherently indicate a favorable time to deliver a chest compression since teaches that any period of time except for the T-wave is a safe time to deliver a compression.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric D. Bertram whose telephone number is 571-272-3446. The examiner can normally be reached on Monday-Thursday from 8:30-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on 571-272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eric D. Bertram
Examiner
Art Unit 3766

EDB

Robert E. Pezzuto
Supervisory Patent Examiner
Art Unit 3766